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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/164,427	09/30/1998	AMIR S. AFSHARY	042390.P5980	6655

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EXAMINER

HUYNH, SON P

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 01/26/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/164,427

Applicant(s)

AFSHARY ET AL.

Examiner

Son P Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 9-12 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9-12 and 25-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's request for reconsideration of the Advisory Action (Paper No. 13) mailed on 01/02/2004. The Advisory Action has been considered and withdrawn.

Response to Arguments

2. Applicant's arguments filed 10/3/2003 have been fully considered but they are not persuasive.

Applicant argues that McArthur fails to teach a "carrier modulated digital signal" because the video signal is output from the PC in NTSC format, which is a color analog TV standard and the composite video generated by PC is an analog format signal. In addition, Applicant argues McArthur fails to teach, "carrier modulated digital signal having a signal operating frequency that occupies the second portion of the operating frequency spectrum of the coaxial cable." Applicant further argues there is no suggestion or motivation to combine McArthur with Terry as proposed by the Examiner.

In response, McArthur discloses FSK or QAM encoding scheme is utilized for the baseband digital televisions in the network can directly tune in video in NTSC format originally from a PC or remodulated video originating from any other device in the network (col. 4, lines 40-55). McArthur also discloses frequency band from 50 to 750

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MHz is used for standard cable television signal; frequency band from 750 to 800 MHz is used for remodulated, local video originating from PCs or other devices in the network. As a result, remodulated video is carrier modulated digital signal, and carrier modulated digital signal having a signal operating frequency that occupies the second portion (750 to 800 MHz) of the operating frequency spectrum of the coaxial cable.

Applicant further argues the conventional cable TV, as defined in Applicant's specification, ranges from 0 to 950 MHz. McArthur discloses frequency range for local channels is 750 to 800 MHz. Therefore, McArthur fails to disclose the second portion operates "at a frequency greater than a signal cut off frequency defined for conventional coaxial cable services."

In response, it is noted that "0-950 MHz where conventional cable TV, digital cable TV and cable modem service are offered" is not recited in independent claims. Independent claims simply recite "frequency defined for conventional coaxial cable services."

Therefore, as discussed above, the "cut off frequency defined for conventional coaxial cable services", as claimed, read on the cut off frequency for standard cable TV (750 MHz) and the "second portion" is operated at frequency band from 750 to 800 MHz, which is greater than cut off frequency for standard cable TV.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention

where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, McArthur discloses frequency band from 750 to 800 MHz is used for local channels as discussed above. McArthur further discloses a larger number of local channels can be implemented if desire (col. 4, lines 65-67). However, McArthur does not specifically disclose the modulated digital signal operating frequency is between 950 and 2000 MHz and has a bandwidth of at least 5 MHz. Terry discloses control signals and possibly other data are carried in a QPSK channel providing an upstream bit rate of 300 Mb/s in a frequency range from 1150 to 1350 MHz (col. 5, lines 55-60) and has a bandwidth of at least 5 MHz (figure 2 or figure 3). Therefore, it would have been obvious to modify McArthur to use the teaching as taught by Terry in order to increase bandwidth thereby allowing more data transmitted in cable.

Furthermore, Applicant argues the combination of Williams and McArthur does not teach or suggest every limitation of independent claims since McArthur does not teach or suggest the limitation of "the second portion operating at a frequency greater than a signal cut off frequency defined for conventional coaxial cable services." Examiner is respectfully disagrees and indicates McArthur teaches "the second portion operating at a frequency greater than a signal cut off frequency defined for conventional coaxial cable services." as discussed above.

For the reason given, the rejections are maintained as repeated below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5,7, 25-29, 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over McArthur (US 5,805,806).

Regarding claim 1, McArthur discloses a way to implement a local area network (LAN) for PCs and televisions in the home environment. The network comprises multiple devices connected to one another using coaxial cable via device interfaces. The network also includes capability to distribute video generated by any PC or other video source in the network to any other PC or television in the network (see col. 4, lines 1-14). McArthur further discloses the frequency band from 50-750MHz is used for cable channels; frequency band 750-800MHz is used for remodulated, local video originating from PCs or other devices in the network (see col. 4, lines 15-55). The interface device receives signal generated by the respective device, process the received signal and transmits the processed signal to other interface device for processing and then outputting to a respective device (see figure 12, and col. 10, line 30+). Thus, McArthur

teaches the devices read on a plurality of clients; the device interfaces read on a plurality of universal client interface adapter since each of the device interface is connected to a respective device, receives the video signal generated by the respective device and communicate with other interface devices via coaxial cable; frequency band used for standard cable television signal reads on the first portion; frequency band used for local video channels read on the second portion. McArthur further discloses the frequency band from 750-800 MHz is used for remodulated, local video originating from PCs or other devices in the network (see col. 4, lines 28-30). It is obvious that the signals transmitted in local video channels are carrier modulated digital signals in order to improve data transmission efficiency.

Regarding claim 2, McArthur teaches at least one of the plurality of universal client interface adapters is integrated into a client of the cable LAN (see figure 1 or figure 12).

Regarding claim 3, McArthur teaches the cable LAN as discussed in the rejection of claim 1. McArthur further teaches the at least one carrier modulated digital signal is an in-home signal (video signal generated by PCs or other video sources and transmitted on local video channels- see col. 4, lines 28-55); and the coaxial cable is taped off a public cable network via jack 8 (see figures 1, 12 and col. 10, lines 45-48).

Regarding claim 4, McArthur teaches a cable LAN as discussed in the rejection of claim 3. Official Notice is taken that using a low pass filter coupled upstream of the in home

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signal to prevent signal generated locally within the network from leaving the network is well known in the art. Therefore, it is obvious to one of ordinary skill in the art to modify McArthur to incorporate a well-know feature in the art in order to block signal generated locally within the network from leaving the network, thereby reduce interfering between frequencies.

Regarding claim 5, McArthur in view of a well-known feature in the art teaches a cable LAN as discussed in the rejection of claim 4. It would have been obvious to one of ordinary skill in the art that the low pass filter having a cut off frequency less than 1000MHz in order to block frequency 1000MHz or greater to get into the external network.

Regarding claim 7, McArthur discloses a cable LAN as discussed in the rejection of claim 1. Official Notice is taken that using a low pass filter coupled upstream of the in home signal to prevent signal generated locally within the network from leaving the network is well known in the art. Therefore, it is obvious to one of ordinary skill in the art to modify McArthur to incorporate a well-know feature in the art in order to block signal generated locally within the network from leaving the network, thereby reduce interfering between frequencies.

Regarding claim 25, McArthur discloses a frequency band from 50-750MHz is used for standard cable channels and a frequency band from 750-800MHz is used for

remodulated, local video originating from PCs or other devices in the network. The device interface receives signal generated by respective device, processes and transmitted to another device interface for processing and outputting to a respective device (see figures 1, 12 and col. 4, line 15+). Apparently, McArthur teaches a method for communicating data between a first universal client interface adapter and a second universal client interface adapter coupled by coaxial cable 15, the method comprising the steps of:

receiving data in the universal client interface adapter from a client;
processing the data within the first client interface adapter into a modulated signal having a signal operating frequency that is greater than a signal cut-off frequency defined for conventional coaxial cable service (frequency band for local video channels is greater than frequency band for cable channels); and
communicating the modulated signal from the first universal client interface adapter to the second universal client interface adapter through coaxial cable 15. It would have been obvious to one of ordinary skill in the art that the data generated by the device is digital data in order to improve data transmission efficiency.

Regarding claim 26, McArthur discloses in response to the person's input via the wireless keyboard 222, the NTSC video output by PC 16 is modulated onto channel 2, where it is received by the tuner in TV interface 34 and displayed on television 18 (see col. 11, lines 27-42) and the frequency band used for local video channels is greater the frequency band used for cable channels (see col. 4, line 28+). Apparently, the digitized

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data is modulated into an analog form; the modulated data is converted into an analog signal having an intermediate frequency; the intermediate frequency is increased to a frequency that is greater than the data operating frequency (channel SN 2); and the power is amplified for transmitting and displaying the signal the signal on the television 18.

Regarding claim 27, McArthur discloses the frequency range from 750-800MHz is used to implement eight local video channels. A larger or smaller number of local channels can be implemented if desire (see col. 4, lines 61+). Therefore, McArthur teaches the modulated digital signal operating frequency is greater than appropriately 450MHz.

Regarding claim 28, the limitations of a cable LAN as claimed correspond to the limitations of method as claimed in claim 25 and are analyzed as discussed in the rejection of claim 25.

Regarding claim 29, McArthur discloses the frequency range from 750-800MHz is used to implement eight local video channels. A larger or smaller number of local channels can be implemented if desire (see col. 4, lines 61+). Therefore, McArthur teaches the modulated digital signal operating frequency is greater than appropriately 450MHz.

Regarding claim 32, McArthur teaches the modulated digital signal has a bandwidth of at least 5MHz (see col. 4, line 28+).

Regarding claim 33, McArthur teaches the normal coaxial cable system transmits signals external to the cable LAN (see figures 1, 12).

5. Claims 9-12, 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over McArthur (US 5,805,806) as applied to claim 1 above, and in view of Terry (US 5,499,047).

Regarding claim 9, McArthur discloses a cable LAN as discussed in the rejection of claim 1. McArthur further discloses a larger number of local channels can be implemented if desired (see col. 4, lines 65-67). However, McArthur does not explicitly disclose the modulated digital signal operating frequency is greater than approximately 950 MHz.

Terry discloses the "signal operating frequency" range from 1150 to 1350 MHz (see col. 5, lines 55-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McArthur to utilize the "operating frequency" greater than approximately 950 MHz in order to increase the bandwidth thereby allowing more data transmitted in the cable.

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Regarding claim 10, McArthur in view of Terry teaches a cable LAN as discussed in the rejection of claim 9. Terry further teaches the signal operating frequency is between 950 MHz and 2000MHz (see col. 5, lines 55-60).

Regarding claim 11, Terry teaches the "signal operating frequency" is range 1150-1350 MHz as discussed in the rejection of claim 10 which is approximately 1300 MHz.

Regarding claim 12, Terry teaches the "signal operating frequency" has a bandwidth of at least 5 MHz (see figure 2 or 3).

Regarding claim 30, McArthur discloses a cable LAN as discussed in the rejection of claim 28. McArthur further discloses a larger number of local channels can be implemented if desire (see col. 4, lines 65-67). However, McArthur does not explicitly disclose the modulated digital signal operating frequency is greater than approximately 950 MHz.

Terry discloses the "signal operating frequency" range from 1150 to 1350 MHz (see col. 5, lines 55-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McArthur to utilize the "operating frequency" greater than approximately 950 MHz in order to increase the bandwidth thereby allowing more data transmitted in the cable.

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Regarding claim 31, McArthur discloses a cable LAN as discussed in the rejection of claim 28. McArthur further discloses a larger number of local channels can be implemented if desired (see col. 4, lines 65-67). However, McArthur does not explicitly disclose the modulated digital signal operating frequency is approximately 1300 MHz.

Terry discloses the "signal operating frequency" range from 1150 to 1350 MHz (see col. 5, lines 55-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McArthur to utilize the "operating frequency" approximately 1300 MHz in order to increase the bandwidth thereby allowing more data transmitted in the cable.

6. Claims 1-5, 7, 25, 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, Jr. (US 6,202,211) and in view of McArthur (US 5,805,806).

Regarding claim 1, Williams discloses a cable LAN comprises a plurality of set top box 22, each of the set top box connected to multiple devices and a server 20 using coaxial cable 65. The set top box receives signal generated locally from respective device such as camera or microphone. A/V mixer in set top box combines audio and video signal received from respective camera and microphone and outputs the mixed signal to modulator 144, channel modulator 144 modulates the mixed signal and transmits them to the server. The demodulator 147 demodulates signal received from server and outputs to Mux 153 and then outputs to a TV (see figures 5 and 23). Williams further

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discloses set top box transmits modulated data to server 20 to maintain a video teleconference (see col. 11, lines 33-37). It is obvious that the set top box may communicate with other set top box in the LAN in order to send modulated signal to other set top box. Therefore, Williams teaches TV, camera, etc. read on a plurality of clients; a plurality of set top box 22 read on a plurality of universal client interface adapters; coaxial cable 65 coupled between a pair of universal client interface adapters; and the signals generated locally read on the carrier modulated digital signals. Williams further discloses the set top box also receives television signal from external network via external coax 64 (see figure 5). Apparently, at least a first portion (portion of operating frequency spectrum in the coaxial cable used for external television signal); and a second portion (portion of operating frequency spectrum used for signal generated locally within the network). However, Williams does not specifically disclose the second portion operating at a frequency greater than a signal cut-off frequency defined for external television signal.

McArthur teaches frequency band from 50-750MHz is used for standard cable television signals. The frequency band from 750-800MHz is used for remodulated local video originating from PCs or other devices in the network (see col. 4, line 28). Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to incorporate the feature as taught by McArthur in order to prevent interfering between signal generated locally and signal received from external network.

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Regarding claim 2, Williams teaches the set top box 22 is integrated into a client of the cable LAN (see figure 5).

Regarding claim 3, Williams teaches the at least one carrier modulated digital is an in home signal (signal generated locally within the in home network) and the coaxial cable is tapped off of a public cable network (external network- see figures 5 and 23).

Regarding claim 4, Williams discloses programmable channel filter 62 is used to prevent signals generated locally within the network from leaving the network (see col. 7, line 25+ and figure 5). It is obvious to one of ordinary skill in the art that the programmable channel filter comprises a low pass filter in order to prevent signal generated locally within the network from leaving the network.

Regarding claim 5, Williams discloses cut-off frequency of programmable channel filter can be controlled by user or server 20 (see col. 17, line 40+). It is obvious to one of ordinary skill in the art to provide a low pass filter having a cut off frequency less than 1000 MHz in order to prevent frequency of 1000MHz or greater from leaving the local network.

Regarding claim 7, Williams teaches the at least one carrier modulated signal is an in-home signal (signal generated locally within the in home network-see figure 23).

Williams further discloses programmable channel filter 62 is coupled upstream of the in

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home signal to a public cable network (external network, and the signal carrier modulated digital signal is generated downstream – see figure 5); the channel filter 62 is used to prevent signals generated locally within the network from leaving the network (see col. 7, line 25+ and figure 5). It is obvious to one of ordinary skill in the art that the programmable channel filter comprises a low pass filter in order to prevent signal generated locally within the network from leaving the network.

Regarding claim 25, Williams teaches a LAN comprises plurality of set top box 22. A coaxial cable is used to connect between the plurality of set top box 22. Channel modulator modulates signal generated locally within the network via mixer 150 and transmits the modulated signal to server 20. Demodulator 147 demodulates signal received from server 20 and outputs the demodulated signal to TV set via Switch 126 (see figures 5, 23). Williams further discloses set top box transmits modulated data to server 20 to maintain a video teleconference (see col. 11, lines 33-37). It is obvious that the set top box may communicates with other set top box in the LAN in order to send modulated signal to other set top box. In addition, Williams discloses the set top box receives video directly from a video camera 54 in a format such as NTSC, PAL, or any other conventional format (see col. 6, line 28+). It is obvious that to use a digital format in order to improve data transmission efficiency. Therefore, Williams teaches a method for communicating data between a first universal client interface adapter (set top box

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22) and a second universal client interface adapter (another set top box 22) coupled by a coaxial cable 65, the method comprising:

receiving digitized data in the first universal client interface adapter from a client;

processing the digitized data within the first universal client interface adapter into a

carrier modulated digital signal having an operating frequency (modulates data

generated locally within the network; and communicating the carrier modulated digital

signal from the first client universal adapter to the second universal client interface

adapter though the coaxial cable (video teleconference). However, Williams does not

specifically disclose the carrier modulated digital signal having a signal operating

frequency that is greater than a signal cut off frequency defined for conventional coaxial cable service.

McArthur teaches frequency band from 50-750MHz is used for standard cable television signals. The frequency band from 750-800MHz is used for remodulated local video originating from PCs or other devices in the network (see col. 4, line 28). Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to incorporate the feature as taught by McArthur in order to prevent interfering between signal generated locally and signal received from external network.

Regarding claim 27, McArthur teaches the carrier modulated digital signal operating frequency is greater than appropriately 450 MHz (see col. 4, line 28+).

Regarding claim 28, the limitations of the cable LAN as claimed correspond to the limitations of the method as claimed in claim 25 and are analyzed as discussed with respect to the rejection of claim 25.

Regarding claim 29, McArthur teaches the carrier modulated digital signal operating frequency is greater than appropriately 450 MHz (see col. 4, line 28+).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

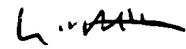
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P Huynh whose telephone number is 703-305-1889. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is 703-306-0377.

Son P. Huynh
January 15, 2004


VICTOR R. KOSTAK
PRIMARY EXAMINER